CLAIMS

1) A nuclear magnetic resonance method of detecting and monitoring the flocculation kinetics of non-solid high molecular weight aggregates of a complex fluid comprising applying to the fluid a first static polarisation magnetic field Bo(z), then at least a second oscillating pulsed magnetic field $B_1(t)$ perpendicular to the first one, created by coils (3) connected to an excitation generator (4) for nuclear magnetic resonance of the nuclei considered and acquisition of the relaxation signals of the nuclei in the fluid, characterized in that it comprises detecting, on the relaxation signals, a first part representative of the relaxation of said aggregates in the fluid and a second part representative of the relaxation of the liquid fraction of the fluid, and determining the flocculation rate (Tf) of said fractions by comparison of the values $M_x(t = 0)$ and $M_{x1}(t = 0)$ extrapolated at the start of the acquisition times of said first part and of said second part respectively.

2) A method as claimed in claim 1, characterized in that the flocculation rate is determined by the relation :

$$Tf = (M_x(t = 0) - M_{x1}(t = 0))/M_x(t = 0).$$

3) A method as claimed in claim 1, characterized in that the flocculation threshold of the fluid is obtained by modelling the relaxation signals actually obtained by means of a combination of exponential functions depending on an adjustment parameter (A) and the threshold corresponding to a maximum value of said adjustment parameter is sought.

4) A method as claimed in any one of the previous claims, characterized in that it comprises applying to the fluid a sequence of two 90° pulses referred to as pseudo-solid echoes in which a 180° magnetization focussing pulse is inserted, between two successive applications of the 90° pulses, with time intervals $\tau/2$ between the different pulses, and measuring the maximum amplitude of the relaxation signals in the neighbourhood of time $t=2\tau$ for different values of τ in the sequence.